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10/574,694	03/05/2007	Jouni Matula	JHN-5373-5	3738
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EXAMINER JANCA, ANDREW JOSEPH				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,694

Applicant(s)

MATULA, JOUNI

Examiner

Andrew Janca

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-38 and 41-55 is/are pending in the application.
- 4a) Of the above claim(s) 25-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-38 and 41-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 35-38 and 41-54 have been considered but are moot in view of the new ground(s) of rejection.

Specification

2. The amendment to the specification filed 11/29/10 has not been entered because it does not conform to 37 CFR 1.121(b) because: the amendments do not identify the location of the paragraphs to be replaced in the specification. No page or line numbers are given, and the specification as filed does not contain paragraph numbers.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the outlet of the process liquid flow duct 70 must be shown or the feature(s) canceled from the claim(s). The process flow duct 70 being apparently depicted in cross-section (figure 3), its outlet would appear to be out of the plane of the figure and not facing the end of the mixing liquid feed duct. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 35-38 and 41-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original disclosure does not

disclose that the closed end of the mixing liquid feed duct should face an outlet of the process liquid flow duct.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 41, 49, and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claims 41 and 50 recite limitations to the process liquid flow duct. The process liquid flow duct not having been antecedently positively recited as part of the claimed apparatus, it is unclear whether it is a required element of the claims.
9. Claim 49 recites "the chemical duct". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 35-38 and 41-55 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2,393,887 to Clements.
12. With regard to claim 35, Clements discloses a feeding device which may be used for feeding chemical into a process liquid flowing in a process liquid flow duct 8-9, the

feeding device comprising: a nozzle casing 1, a feeding liquid duct 4-8, and a mixing apparatus 5-6-10-11 within the nozzle casing and including: a mixing space 14 isolated from the feeding liquid duct, a chemical feed duct, one of (10, 7-10-17-20) to pass the chemical to the mixing space, and a mixing liquid feed duct 7-5a-5-6 to pass a mixing liquid to the mixing space, the mixing liquid feed duct having a sidewall 5-6 and said mixing liquid feed duct closed at an end, the closed tip of 6 (figures 1, 3) facing an outlet of the process liquid flow duct 8-9: wherein the end 6 facing the outlet and the sidewall 5 define said mixing space 14, and the mixing space having at least one outlet opening in the side wall 5-6, one of the outlet apertures of 5-6, of the mixing liquid feed duct for feeding a mixture of the chemical and the mixing liquid to the feeding liquid duct 4-8 (figures 1, 3; 1:36 left column forward). Regarding the intended use of the apparatus, it has been held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987); and that "[e]xpressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." See *Ex parte Thilbault*, 164 USPQ 666, 667 (Bd. App. 1969).

13. With regard to claim 36, Clements discloses the feeding device according to claim 35, wherein the chemical feed duct 10 is a thin pipe capable of feeding small chemical amounts to the mixing space 14 (figure 1). Regarding the intended use of the apparatus, it has been held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of

the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987).

14. With regard to claim 37, Clements discloses the feeding device according to claim 35, wherein the chemical feed duct 10 extends to the isolated mixing space 14 centrally inside the feeding liquid duct 4-8 (figure 1).

15. With regard to claim 38, Clements discloses the feeding device according to claim 35, wherein the mixing liquid feed duct 7-5a-5-6 comprises a cylindrical mixing liquid feed duct 7-5a-5 capable of feeding mixing liquid to the mixing space (figure 1).

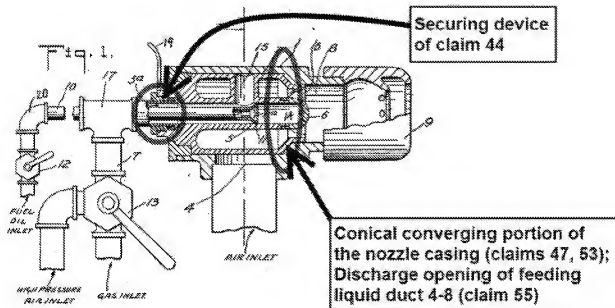
16. With regard to claim 41, Clements discloses the feeding device according to claim 35, wherein the process liquid flow duct 8-9 includes at least a feed opening 8 into which also the mixing liquid feed duct 7-5a-5-6 extends while the feeding device is secured to the process liquid duct (figure 1).

17. With regard to claim 42, Clements discloses the feeding device according to claim 35, wherein the mixing liquid feed duct 7-5a-5-6 is at least partly located inside the nozzle casing 1 feeding the feeding liquid (figure 1).

18. With regard to claim 43, Clements discloses the feeding device according to claim 35, further comprising a securing device 17 that secures the chemical feed duct 10 to the mixing liquid feed duct 7-5a-5-6 (figure 1).

19. With regard to claim 44, Clements discloses the feeding device according to claim 35, further comprising a securing device, the unnumbered ring to which valve handle 19 is attached (see figure 1 as annotated below), that secures the mixing liquid feed duct 7-5a-5-6 to the nozzle casing 1 so that a [angular] position of the mixing liquid

feed duct can be adjusted: rotating 19 adjusts the angular position of sleeve valve 2 forming part of the body of the mixing liquid feed duct 7-5a-5-6 (figures 1-4; 1:37-46, left column).



20. With regard to claim 45, Clements discloses the feeding device according to claim 35, further comprising a mounting 2-19 for securing the nozzle casing 1 to the mixing liquid duct 7-5a-5-6 (figures 1-4; 1:37-46, left column).

21. With regard to claim 46, Clements discloses the feeding device according to claim 35, further comprising a mount 2-19 securing the mixing apparatus 5-6-10-11 to the nozzle casing 1 wherein the mount is adjustable (figures 1-4; 1:37-46, left column).

22. With regard to claim 47, Clements discloses the feeding device according to claim 35, further comprising a conical converging portion in the nozzle casing 1 defining a converging cross-sectional area of a flow path of the feeding liquid to increase a flow velocity of the feeding liquid (figure 1, annotated above).

23. With regard to claim 48, Clements discloses the feeding device according to claim 35, further comprising a conical converging portion 11 in the mixing liquid feed duct 7-5a-5-6 including a cross-sectional area of a flow path of the mixing liquid to increase a flow velocity of the mixing liquid: conical portion 11 converges the fluid streams from duct 10 and the mixing liquid feed duct "with great force" (1:20-25 right column; figure 1).

24. With regard to claim 49, Clements discloses the feeding device according to claim 35, further comprising valves 12, 13 in the chemical [feed] duct 7-10-17-20 and connections, the valve handles, which may be used to control the flow of the chemical (figure 1).

25. With regard to claim 50, Clements discloses the feeding device according to claim 35, wherein a feed opening 8 for the mixture of chemical and mixing liquid is located inside the process liquid flow duct 8-9 when the feeding device has been secured to the process liquid flow duct (figure 1).

26. With regard to claim 51, Clements discloses the feeding device according to claim 35, further comprising a feed opening, another one of the outlet apertures of 5-6, for mixture of chemical and mixing liquid located in a feed liquid feed opening 8 (figure 1).

27. With regard to claim 52, Clements discloses a feeding device which may be used for introducing a chemical into a process liquid flowing in a process liquid flow duct 8-9, the feeding device comprising: a nozzle casing 1 having a hollow section defining a flow path 4-8 for a feeding liquid and a feed opening 8 at an outlet of the flow path; a mixing

liquid feed duct 7-5a-5-6 having: a sidewall 5-6 extending through the hollow section of the nozzle casing, a mixing chamber 14 between the sidewall, and an end of the mixing feed duct, the closed tip of 6 (figures 1, 3), and the mixing chamber includes at least one aperture in the sidewall 5-6 which may be used to discharge a mixture of chemical and mixing liquid from the mixing chamber into the flow path of the feeding liquid in the hollow section of the nozzle casing, wherein the mixing chamber 14 is isolated from the flow path 4-8 of the feeding liquid, and a chemical feed duct 10 extending through the mixing liquid feed duct and having a chemical discharge port 11 at the mixing chamber, wherein the mixture of chemical and mixing liquid may be formed in the mixing chamber 14 (figures 1, 3; 1:36 left column forward). Regarding the intended use of the apparatus, it has been held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987); and that “[e]xpressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” See *Ex parte Thilbault*, 164 USPQ 666, 667 (Bd. App. 1969).

28. With regard to claim 53, Clements discloses the feeding device of claim 52 wherein the nozzle casing 1 includes a converging casing section which forms a converging section of the flow path for the feeding liquid (figure 1, annotated above).

29. With regard to claim 54, Clements discloses the feeding device of claim 52 wherein the mixing liquid feed duct 7-5a-5-6 is coupled to the nozzle casing 1 by an adjustable support 2-19 which adjusts a position of the at least one aperture with

respect to the feed opening: rotating 19 adjusts the angular position of the at least one aperture of 5-6, formed in sleeve valve 2 forming part of the body of the mixing liquid feed duct 7-5a-5-6 (figures 1-4; 1:37-46, left column).

30. With regard to claim 55, Clements discloses a feeding device which may be used for feeding a chemical into a process liquid flowing through a process liquid flow duct 8-9, the feeding device comprising: a feeding liquid duct 4-8 including a discharge opening (see figure 1 as annotated above) capable of discharging a feeding liquid to the process liquid; a mixing liquid feed duct 7-5-5a-6 extending through the feeding liquid duct and the mixing liquid feed duct is capable of passing a mixing liquid, wherein the mixing liquid feed duct includes an sidewall 5-6 and an end wall, the closed tip of 6 (figures 1, 3), wherein the end wall extends beyond the discharge opening of the feeding liquid duct 4-8 and extending into the process liquid flow duct 8-9; a mixing space 14 in the mixing liquid feed duct, wherein the mixing space is adjacent the end wall and within the sidewall 5-6 of the mixing liquid feed duct; a chemical feed duct 10 extending through the mixing liquid feed duct and having a discharge opening 11 proximate to the mixing space in the mixing liquid feed duct, wherein the chemical flows through the chemical feed duct and enters the mixing space to form a mixture of the chemical and the mixing liquid, and a mixture discharge opening, one or more apertures at the end of 6, in the side wall 5-6 of the mixing liquid feed duct, wherein the mixture discharge opening is configured to discharge the mixture of the chemical and the mixing liquid from the mixing space into the mixing liquid flowing into or from the discharge opening of the feeding liquid duct 4-8 (figures 1, 3; 1:36 left column forward). Regarding

the intended use of the apparatus, it has been held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987); and that "[e]xpressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." See *Ex parte Thilbault*, 164 USPQ 666, 667 (Bd. App. 1969).

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **this action is made final**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Janca whose telephone number is (571) 270-5550. The examiner can normally be reached on M-Th 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJJ

/DAVID L. SORKIN/
Primary Examiner, Art Unit 1774